



How to deliver an effective senior exercise class

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DELIVER AN EFFECTIVE SENIOR EXERCISE CLASS

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THE BENEFITS

We intuitively know what research has demonstrated – that physical activity can boost health benefits in both sexes up to the age of 90 years (1) improve mood, reduce anxiety and enhance self perception (2). Research also indicates that physical activity can delay the progression of osteoporosis by retarding the rate at which bone mineral density is reduced from the late 20's onwards (3). Social interaction is an important part of any wellness programme and often part of what keeps older people returning to exercise classes. A likeable leader and a welcoming atmosphere are also keys to success.

BETTER DESIGNED?

The number of opportunities for physical activity for older people is increasing and the quality of what is delivered should be considered. Could exercise classes for older adults be better designed from a structural and functional perspective so the participants are getting greater physical benefit? Asking the following questions

Picture a movement class for seniors. What comes to mind? Most likely, you will envision a group of seniors sitting in chairs with 'oldies' or big band music playing in the background, an encouraging instructor, a "feel good" ambiance and simple range of motion type movements being practised. That's the tone in many senior centres and retirement communities across the country. So, what's the problem? In a time when people are living longer and more active lifestyles, we propose that we may be selling many of our seniors short by oversimplifying the design of group exercise classes. This article suggests ways of delivering effective senior exercise classes.

might help to clarify the problem:

- Are group exercise leaders adequately trained in safe movement?
- Are they skilled in understanding the diverse physical needs of older adults or are we hiring well-meaning people who "love working with old people?"
- As fitness and well-being professionals, are we doing our research? Are we aware that there are more than 1.14 million postmenopausal women who have been diagnosed with osteoporosis in England and Wales alone and one in two women and one in five men will suffer a fracture after

- the age of 50? (4). Are we offering exercises that are safe for people at greatest risk for osteopenia and osteoporosis ie. post-menopausal women and men in their later years?
- Are we designing the classes so we are working to help with the postural compensations that come with the ageing process?
- Are we taking the chance to re-educate people and help seniors learn more about their bodies?
- Or do we only offer simple exercises that are easy for everyone?

“SOCIAL INTERACTION IS AN IMPORTANT PART OF ANY WELLNESS PROGRAMME AND OFTEN PART OF WHAT KEEPS OLDER PEOPLE RETURNING TO EXERCISE CLASSES”

THE GOALS OF THE CLASS

Exercise classes for seniors can be fun, motivating, social and offer the participants ways to move that will serve their bodies both structurally and functionally. Exercise leaders and activity coordinators need to look hard

at their classes and see if there could be some changes made in this new direction. In their considerations they should ask, "what are the goals of the class?"

Motivation

In designing senior exercise classes, leaders can start by asking participants what motivates them. In our experience, many seniors are interested in the following goals:

- Maintaining or improving their balance to prevent falls
- Having good posture
- Being able to stay as independent as possible for as long as possible
- Maintaining or improving their strength, endurance and flexibility
- Managing pain
- Enjoying the social aspects of group exercise
- Learning new things.

POSTURAL ALIGNMENT

If we examine the basics of postural alignment and the patterns of postural change, balance and movements that promote independence, we can begin to address the specific needs of this group and truly help them function physically in a way that supports these goals.

If one observes a group of seniors gathering for an exercise class, one will see great differences in their posture and alignment. Some will be standing tall, others will demonstrate the more stooped position stereotypical of the "crooked old man/woman". These postural changes usually go hand in hand with changes in the bone density of the skeleton. However, low bone density and osteoporosis are often present with people who do not have this classic round shouldered, forward bent position, so it would be advantageous for all senior exercise instructors to presume that all of the participants have compromised bone density.

If we analyse the patterns of postural change (see figure 1), we see that the areas of tightness in the body are the chest (pectorals), the front of the hips (rectus femoris and iliopsoas), the anterior neck (scalenes and sternocleidomastoid), and the anterior trunk. We see the rib cage and the pelvis coming closer together as this pattern progresses, this restricts breathing, the head reaching further forwards and the shoulders compensating for this forward lean with

a backwards bracing tendency. Many seniors lose the strength in their gluteal region and have increasing difficulty getting in and out of chairs. They become more sedentary and spend more and more time in a flexed seated position.

EXACERBATING OR COUNTERBALANCING?

Is the traditional senior exercise class helping to exacerbate or counterbalance these tendencies? Many classes involve predominantly seated exercises (which adds compression to the spine) with little attention to posture. Class formats include many knee lifts and hip flexion movements so promoting the tightening at the anterior hip. Also common are flexion-based upper body movements (closing off the chest) and exercises that are contraindicated for people with low bone density or osteoporosis (sit ups, percussive side bends, rotation movements without attention to posture, toe touching etc). All of these movements add compression forces to the spine and may increase the risk

of fracture. There are often very few standing exercises so very little weight bearing activity for the hip joint- a joint in which there are 300,000 fractures per year (5). For women, the lifetime risk of sustaining a hip fracture is 1 in 6, greater than the 1 in 9 chance of developing breast cancer (6).

RETHINKING CLASS FORMATS

Obviously, older adults are as diverse in their physical abilities as other populations. Encouraging participants to listen to their bodies and not overdo it are certainly key issues. However, many older adults are often surprised by what they can do. If new movements are presented in a non-threatening and progressive manner, with an explanation about how the benefits tie into functional strength, promoting balance or maintaining independence, they are much more likely to be accepted and attempted eg. "doing these simple toe taps helps to strengthen our shins, or tibialis anterior muscles (we all palpate as we lift the toe), these muscles help us lift the foot as we take each step and help to prevent us shuffling or tripping."

RECOMMENDATIONS

In reconsidering the structure for a senior class, the following components are recommended:

1. Include standing, weight bearing movements to add strength to the hip joint, extension exercises for the weak gluteals and hamstrings, balance exercises and attention to standing postural alignment.
2. Choose a selection of seated exercises that are done while in the "perch posture" - a seated alignment that is forward in the chair seat thus using the erector spinae muscles down the spine, and engaging the trunk (see figure 2).
3. Choose upper body strength exercises using hand weights or resistance tubing with focus on strengthening the areas of weakness eg. the mid back and posterior shoulders to promote postural balance.
4. Select flexibility exercises for the areas of tightness- chest, hip flexors, calves, neck and anterior shoulders.
5. Include relaxation and breath awareness exercises to enhance the expansion of the breath cycle and promote an inner, mindful focus.

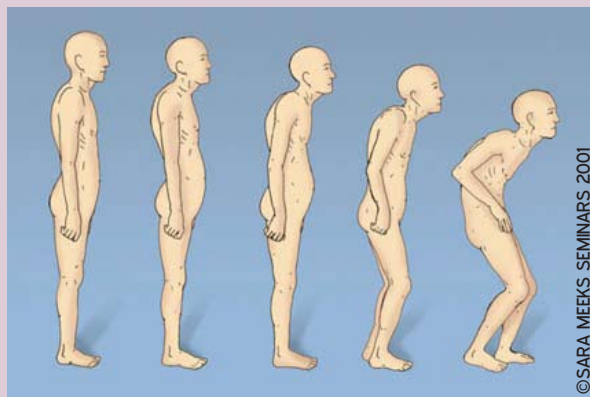
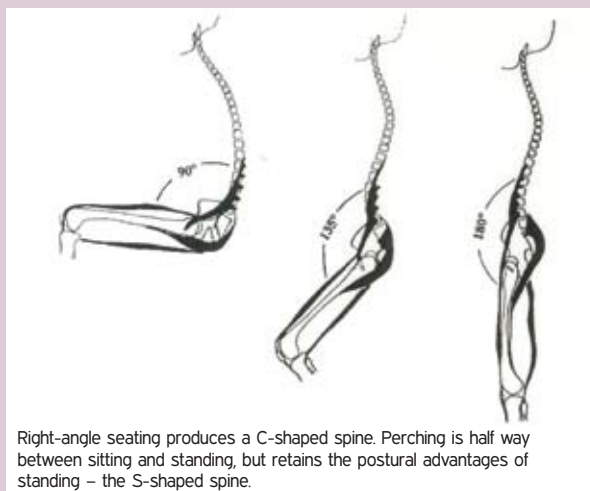


Figure 1: The patterns of postural change



Right-angle seating produces a C-shaped spine. Perching is half way between sitting and standing, but retains the postural advantages of standing - the S-shaped spine.

Figure 2: The perch position (7)

EXAMPLES OF EXERCISES FOR A CLASS

A sample of a 45 minute class format is as follows with the rationale for why these exercises were chosen:

Standing

1. Standing posture check. Deep breathing. (promoting gravity moving through hip joint, postural awareness)
2. Shoulder rolls backwards (opening the chest)
3. Mid back squeezes, retraction and depression (strengthening rhomboids and middle/lower trapezius)
4. Standing behind the chair and holding on for balance if needed: Pliés (lower body strengthening)
5. Calf raises and calf stretch
6. Ankle rolls one leg at a time which promote better balance and walking gait function)
7. Gluteal extensions
8. Hamstring curls strengthen weak extensor muscles of the hip).

Seated

- In the "perch posture"- sitting towards the front of the chair, with feet underneath knees and spine in elongated position to strengthen the postural muscles eg. erector spinae
1. Breath awareness
 2. Shoulder openers using the tie (chest opening, shoulder girdle ROM)
 3. Gentle neck stretches (with caution due to vertebral low bone density)
 4. Resistance band exercises- lateral raises, upright row, mid back row, overhead shoulder press, (promoting upper body endurance and weight bearing for wrist and upper body skeleton)
 5. Shoulder and chest stretches
 6. Wrist and hand stretches
 7. Toe lifts (tibialis anterior strengthening for balance and gait function)
 8. Standing up and sitting down from chair (the hip hinge) practising correct technique to help with functional movement to help lift out of chairs, off the toilet etc.

Standing

- With chair to one side for balance
1. Simple weight shifts from side to side, forwards to back.
 2. Hip abduction (strengthening supporting hip and gluteals)
 3. One leg supports, other leg traces figure 8's
 4. Static lunges
 5. Standing balance challenge eg. tandem balance or one legged balance

Seated stretching

1. Hamstring stretch
2. Groin stretch
3. Stretch for hip muscles
4. Hip flexor/iliopsoas stretch.

For a video version of this class go to the online version of this publication at www.sportex.net (online subscription required)

Closing

- 1) Relaxation- breathing awareness or guided visualisation
- 2) Community building exercise eg. trade a shoulder massage

6. Promote social connections by including activities that encourage interaction eg. introducing oneself to a person whose name is not known or remembered, teach participants how to do a simple shoulder massage to trade at the end of class, give them a quiz question to work on for next class with a partner or do a partner style stretching activity.

7. If participants can safely get down to and up from the floor, this is a great position for promoting decompression of the spine and a wonderful position for relaxation. Keeping knees bent in

supine protects the lower back and would be recommended.

In teaching groups of seniors aged up to 90 years old, we have been amazed at the physical opening of hips and shoulders, the increasing strength in the lower body and the amazing mental willingness to try new things. Very gentle classical music can be used in the background as some people find more intrusive music distracting. This allows the instructor opportunities to share teaching points about the body as the class stretches and strengthens, or offer reasoning

why certain exercises are functionally important and relevant to their goals.

CONCLUSION

Hopefully, as the ageing population grows, we will see a developing niche within the fitness and well-being profession that attracts leaders who are interested in specialising in teaching and working with older adults. Senior programmes should not simply be easier or "watered down" version of offerings for younger adults. Older adults deserve to have their needs met by qualified and motivated professionals. Let's raise the bar and work towards designing and implementing movement programs that not only feel good but have real, functional benefit for the people we serve.

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